

PROCEEDINGS
OF THE
AMERICAN PHILOSOPHICAL SOCIETY,
HELD AT PHILADELPHIA, FOR PROMOTING USEFUL KNOWLEDGE.

VOL. XXXIII.

JANUARY, 1894.

No. 144.

January 5, 1894.

The annual election for Officers and Councilors was held this afternoon between the hours of 2 and 5 P.M. The result was submitted to the Society at the evening meeting by the officers of the election.

Stated Meeting, January 5, 1894.

President, Mr. FRALEY, in the Chair.

Prof. W. H. Appleton, a lately elected member, was presented and took his seat.

Correspondence was submitted as follows:

A circular was received from the Nederlandsche Maatschappij ter bevordering van Nijverheid, Harlem, offering a prize for 1894.

Accessions to the Library were reported from the Australasian Association for the Advancement of Science, Sydney; Institut Egyptien, Cairo, Egypt; Anthropological Society, Tokyo, Japan; Friesch. Genootschap van Geschied, etc., Leuwarden; Société R. de Géographie, Antwerp, Belgium; Société Hongroise de Géographie, Budapest; Siebenbürgische Verein

für Naturwissenschaften, Hermanstadt, Transylvania; Physiologische Gesellschaft, Messrs. R. Friedländer und Sohn, Berlin, Prussia; Verein für Erdkunde, K. Sächs. Alterthums-Verein, Dresden, Saxony; K. Leopoldinisch-Carolinische Deutsche Akademie der Naturforscher, Halle a. S., Prussia; Deutsche Seewarte, Hamburg, Germany; K. Sächs. Gesellschaft der Wissenschaften, Leipzig; K. B. Akademie der Wissenschaften, Munich, Bavaria; Society of Arts, Royal Astronomical Society, Editors of *Nature*, Royal Society, Meteorological Society, Prof. Joseph Prestwich, London, Eng.; Literary and Philosophical Society, New Castle-upon-Tyne, Eng.; Geological Survey of Canada, Ottawa; Bureau of Statistics of Labor, Athenæum, The family of the late John Pickering, Boston, Mass.; Harvard College, Mr. A. McFarland Davis, Cambridge, Mass.; American Antiquarian Society, Worcester, Mass.; The Travelers Insurance Company, Hartford, Conn.; Editor of the *Archæological Magazine*, Meriden, Conn.; Yale University, Editors of *American Journal of Science*, New Haven, Conn.; American Institute of Electrical Engineers, Mathematical Society, Meteorological Observatory, Editor of the *Popular Science Monthly*, Prof. J. A. Allen, New York, N. Y.; Free Public Library, Jersey City, N. J.; Geological Survey of New Jersey, Trenton; American Chemical Society, Easton, Pa.; Editors of the *Medical News*, College of Pharmacy, University of Pennsylvania, Messrs. Julius F. Sachse, Henry Phillips, Jr., Philadelphia; Editor of the *American Chemical Journal*, Baltimore, Md.; U. S. Geological Survey, Hydrographic Office, Commissioner of Labor, Bureau of Statistics, Washington, D.C.; State Board of Health, Nashville, Tenn.; Academy of Science, St. Louis, Mo.; Geological Publishing Company, Minneapolis, Minn.; Kansas Academy of Science, Topeka, Kans.; Academy of Science, Tacoma, Wash.; Agricultural Experiment Stations, Pennsylvania State College, Knoxville, Tenn., Madison, Wis., Laramie, Wyo; Sociedad Científica "Antonio Alzate," Observatorio Astronómico Nacional de Tacubaya, Mexico, Mex.; Société Scientifique du Chili, Santiago.

Photographs for the Society's Album were received of Messrs. R. Meade Bache and Thomas M. Cleemann.

The following deaths were announced :

George de Benneville Keim, Philadelphia, December 18, 1893, æt. 64.

Dr. Charles M. Cresson, Philadelphia, December 27, 1893, æt. 66.

Dr. Dionys Stuer, Vienna, October 9, 1893.

The President having been authorized to appoint suitable persons to prepare the usual obituary notices, subsequently appointed Dr. Daniel G. Brinton for Mr. Keim.

The officers of the election held this afternoon pursuant to the laws of the Society reported the following members had been elected as Officers and Council of the Society for the ensuing year.:

President.

Frederick Fraley.

Vice-Presidents.

E. Otis Kendall, W. S. W. Ruschenberger, J. P. Lesley.

Secretaries.

George F. Barker, Daniel G. Brinton, Henry Phillips, Jr.,
George H. Horn.

Curators.

Patterson DuBois, J. Cheston Morris, R. Meade Bache.

Treasurer.

J. Sergeant Price.

Councilors for Three Years.

William P. Tatham, George R. Morehouse, Samuel Wagner,
William C. Cattell.

*Councilor for Two Years, in place of Thomas H. Dudley,
deceased.*

Henry Hartshorne.

Mr. Henry Phillips, Jr., was renominated for Librarian, and the nominations were closed.

Dr. Daniel G. Brinton read a paper on "Nagualism."

Mr. Lyman read a paper on "The Age of the Newark Brownstone."

Dr. Cope presented a communication on the fishes of Rio Grande do Sul.

Pending nominations Nos. 1268, 1269, 1270, 1271, 1272, 1273, 1274 were read.

The report of the Finance Committee was presented and the appropriations for the year were passed.

The Michaux Committee presented the following report and resolution, which were adopted:

The Michaux Committee of the American Philosophical Society respectfully reports, that at a meeting held on December 14, 1893, a letter was received from Dr. J. T. Rothrock enclosing list of the time and subjects proposed for the Fifteenth Course of Lectures for 1894, given under the auspices of the American Philosophical Society:

MONDAY EVENINGS.

Jan. 22. Pennsylvania Forests and Forest Trees (illustrated).

" 29. Protection of Pennsylvania Forests.

Feb. 5. Waste of Pennsylvania Forests (illustrated).

" 12. Possibilities of Forest Restoration.

" 19. Legal Relations of our Forests.

" 26. Trees in Cities and Towns (illustrated).

March 5. Waste Lands of the Commonwealth (illustrated).

The Lectures will be delivered in the Pennsylvania University Building, which has been kindly tendered to him for the purpose. He estimates the cost of the lectures at \$240.

The Committee approved of Dr. Rothrock's proposition, and asks for the passage by the Society of the following resolution:

"*Resolved*, That the sum of two hundred and forty dollars be appropri-

ated out of the income of the Michaux Fund for the expenses of the Fifteenth Course of the Michaux Forestry Lectures by Prof. J. T. Rothrock."

By order of the Committee,

J. SERGEANT PRICE, *Secretary*.

The Librarian reported that Dr. Elliott Coues had returned personally all the Lewis and Clarke manuscripts borrowed by him ; that the same were correct in number and condition ; that Dr. Coues had arranged them in a most excellent and careful manner, so as to facilitate all future reference ; in fact, that they were in much better condition than when loaned by the Society.

The Treasurer was authorized to receive from the city of Philadelphia the sum of \$5000 due January 1, 1894, and to sign proper quittances therefor.

And the Society was adjourned by the President.

Age of the Newark Brownstone.

By Benj. Smith Lyman.

(Read before the American Philosophical Society, January 5, 1894.)

There seems to be reasonable ground for doubt whether the rock beds of the Newark, N. J., brown building stone quarries belong even to the Mesozoic, as they have generally been thought to. In spite of the unfavorable character of the sandstone for preserving fossils, it has yielded a number of specimens, and the identification of at least two species has been attempted. In the *New Jersey State Geological Report* for 1879, p. 26, the late deeply lamented State Geologist, Prof. Cook, speaks of certain fossils at the closely adjacent Belleville quarries, evidently in the same sandy beds, as follows, citing the unexcelled authority of Lesquereux :

"At the Belleville quarries thin seams of coal and impressions of the stems and branches of plants are not uncommon. A fragment of the stem of a plant with surface markings like the *Lepidodendron* was found, and is now the property of Mr. David Hitchcock, of Orange. It is a very plainly marked, flattened stem, eight inches long, four and one-half inches wide, and one and one-half inches thick. Photographs of this